Before the
FEDERAL COMMUNICATIONS COMMISSION FCC 95-426
Washington, D.C. 20554

Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation	)))	WT Docket No. 95-157 RM-8643

NOTICE OF PROPOSED RULE MAKING

Adopted: October 12, 1995 Released: October 13, 1995

Comment Date: November 30, 1995
Reply Comment Date: December 21, 1995

By the Commission:

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I. INTRODUCTION

1. By this *Notice*, we propose to adopt a plan for sharing the costs of relocating microwave facilities currently operating in the 1850 to 1990 MHz ("2 GHz") band, which has been allocated for use by broadband Personal Communications Services ("PCS"). Our proposal, which is based on a Petition for Rulemaking filed by Pacific Bell Mobile Services,[1] as modified by the Personal Communications Industry Association (hereinafter referred to as the "PCIA consensus proposal"), would establish a mechanism whereby PCS licensees that incur costs to relocate microwave links would receive reimbursement for a portion of those costs from other PCS licensees that also benefit from the resulting clearance of the spectrum. We seek comment on the desirability of establishing a cost-sharing mechanism for microwave relocation and on the specifics of this proposal.

2. In addition to cost-sharing issues, we seek comment on whether to clarify certain other aspects of the microwave relocation rules adopted in our *Emerging Technologies* docket, ET Docket No. 92-9. Specifically, we seek comment on:

(1) whether to clarify the definition of "good faith" negotiations during the mandatory negotiation period;

(2) whether to clarify the definition of "comparable" facilities, which must be provided to microwave incumbents by PCS licensees;

(3) whether to clarify our rules that grant relocated microwave licensees a twelve month trial period to ensure that their new facilities are indeed comparable;

(4) whether to continue granting any 2 GHz microwave applications on a primary basis during the relocation process; and

(5) whether to place a time limit on a PCS licensee's obligation to provide comparable facilities.

3. In seeking comment on these issues, we observe at the outset that the existing relocation procedures for microwave incumbents adopted in the *Emerging Technologies* docket were the product of extensive comment and deliberation prior to the initial licensing of PCS. We emphasize that our intent is not to reopen that proceeding here, because we

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[1] *Petition for Rulemaking of Pacific Bell Mobile Services,* RM-8643 (filed May 5, 1995) ("PacBell Petition"); *see Public Notice*, Report No. 2073 (May 16, 1995).

believe that the general approach to relocation in our existing rules is sound and equitable.[2] Nevertheless, we believe that the cost-sharing proposal presented below is an important modification that will promote the equitable relocation of microwave systems and the rapid deployment of PCS. We also note that the PacBell Petition addresses only cost-sharing for PCS licensees operating in the 2 GHz band. We therefore seek comment on whether cost-sharing and other rule clarifications adopted in this proceeding should apply to other emerging technology services (*e.g.*, 2.110 - 2.150 and 2.160 - 2.200 GHz) that have not yet been licensed.

4. Furthermore, as of the adoption date of this *Notice*, the Commission will continue to accept microwave applications for primary status in the 2 GHz band, however, the Commission will process only minor modifications that would not add to the relocation costs of PCS licensees. Thus, the Commission will grant primary status applications for the following limited number of minor technical changes: decreases in power, minor changes in antenna height, minor coordinate corrections (up to two seconds), reductions in authorized bandwidths, minor changes in structure heights, changes in ground elevation (but preserving centerline height), and changes in equipment. Any other modifications will be permitted only on a secondary basis, unless a special showing of need justifies primary status and the incumbent is able to establish that the modification would not add to the relocation costs of PCS licensees.

II. BACKGROUND

A. Existing Relocation Procedures

5. In the *First Report and Order and Third Notice of Proposed Rule Making* in ET Docket No. 92-9, we reallocated the 1850-1990, 2110-2150, and 2160-2200 MHz bands from private and common carrier fixed microwave services to emerging technology services.[3] We also established procedures for 2 GHz microwave incumbents to be cleared off of emerging technology spectrum and relocated to available frequencies in higher bands. The *ET First Report and Order* set forth a regulatory framework that encourages incumbents to negotiate voluntary relocation agreements with emerging technology licensees or manufacturers of unlicensed devices when frequencies used by the incumbent are needed to

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[2] We note that the U.S. House of Representatives has recommended that the voluntary negotiation period established by the *Third Report and Order* in ET Docket 92-9 be shortened from two years to one year. *See* Recommendations of the House Committee on Commerce Pursuant to the Concurrent Resolution on the Budget for Fiscal Year 1996 (agreed to by voice vote on September 13, 1995).

[3] Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *First Report and Order and Third Notice of Proposed Rule Making*, 7 FCC Rcd 6886 (1992) (*"ET First Report and Order"*).

implement the emerging technology. The *ET First Report and Order* also stated that, should voluntary relocation negotiations fail, the emerging technology licensee could request mandatory relocation of the existing facility, provided that the emerging technology service provider pays the cost of relocating the incumbent to a comparable facility.[4]

6. In our 1993 *Third Report and Order* in ET Docket No. 92-9,[5] as modified on reconsideration by our 1994 *Memorandum Opinion and Order*,[6] we established additional details of the transition plan to enable emerging technology providers to relocate incumbent facilities to other spectrum. The relocation process now in effect consists of two periods that must expire before an emerging technology licensee may proceed to request involuntary relocation. The first is a fixed two year period for voluntary negotiations (three years for public safety incumbents, *e.g.*, police, fire, and emergency medical[7]), commencing with our acceptance of applications for emerging technology services.[8] During the initial voluntary phase, emerging technology providers and microwave licensees may negotiate any mutually acceptable relocation agreement. Our rules do not require microwave incumbents to meet or negotiate with emerging technology licensees during this period; rather, negotiations are strictly voluntary and are not defined by any parameters. Thus, an emerging technology licensee may choose to offer premium payments or superior facilities as an incentive to the incumbent to relocate quickly.

7. If no agreement is reached during the voluntary negotiation period, the emerging technology licensee may initiate a one-year mandatory negotiation period -- or two-year mandatory period if the incumbent is a public safety licensee -- during which the parties are required to negotiate in good faith.[9] Should the parties fail to reach an agreement during the mandatory negotiation period, the emerging technology provider may request involuntary

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[4] *Id.* at ¶ 24.

[5] Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *Third Report and Order and Memorandum Opinion and Order*, 8 FCC Rcd 6589 (1993) (*"ET Third Report and Order"*).

[6] Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *Memorandum Opinion and Order*, 9 FCC Rcd 1943 (1994) (*"ET Memorandum Opinion and Order"*).

[7] The class of public safety incumbents that are eligible for a three year voluntary period are defined in *ET Memorandum Opinion and Order*, 9 FCC Rcd 1943 at ¶¶ 36-41.

[8] 47 C.F.R. §§ 21.50(b), 22.50(b), 94.59(b), and 94.59(f) (1994).

[9] *ET Third Report and Order*, 8 FCC Rcd 6589 at ¶ 15; *see also* 94.59(f). Note that the parties may negotiate any mutually agreeable relocation plan at any time during the voluntary and mandatory negotiation process.

relocation of the existing facility and, in such a case, the emerging technology provider is only required to:

(1) Guarantee payment of all costs of relocating the incumbent to a comparable facility. Relocation costs include all engineering, equipment, site costs and FCC fees, as well as any reasonable additional costs.

2) Complete all activities necessary for placing the new facilities into operation, including engineering and frequency coordination.

3) Build and test the new microwave (or alternative) system.[10]

Once the new facilities are available and comparability has been determined, the Commission will amend the operation license of the fixed microwave operator to secondary status.[11]

8. Section 94.59 of the Commission's rules requires that emerging technology licensees provide incumbent microwave licensees with "comparable facilities."[12] We stated in the *ET Third Report and Order* that if any disputes over comparability were brought to the Commission for resolution, we would make a determination based on whether the facilities are "equal to or superior to existing facilities." As part of that determination, we stated that we would consider, *inter alia,* system reliability, capability, speed, bandwidth, throughput, overall efficiency, bands authorized for such services, and interference protection.[13]

9. After relocation, the microwave incumbent is entitled to a one-year trial period to determine whether the facilities are indeed comparable. If the relocated incumbent can demonstrate that the new facilities are not comparable to the former facilities, the emerging technology licensee must remedy the defects or pay to relocate the microwave licensee back to its former or an equivalent 2 GHz frequency.[14]

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[10] *Id.* at ¶ 5.

[11] 47 C.F.R. § 94.59(c).

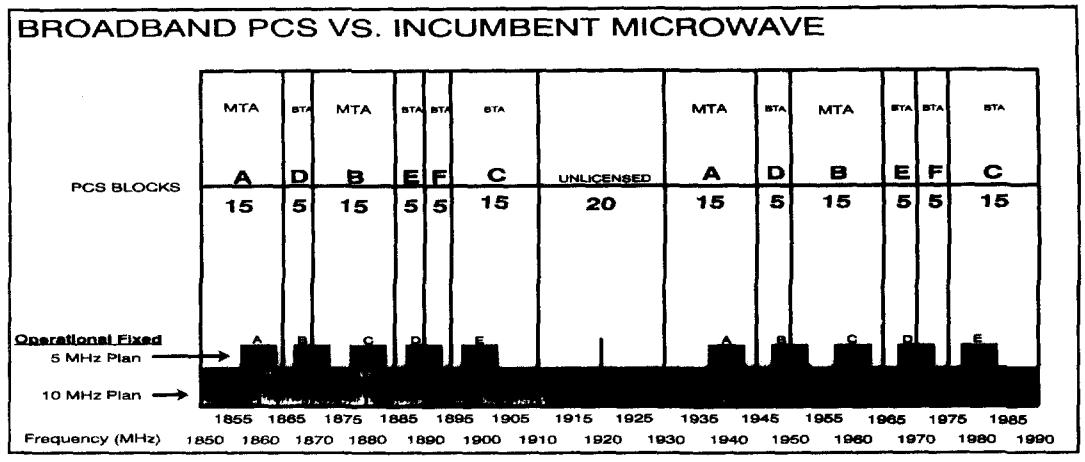
[12] 47 C.F.R. § 94.59.

[13] *ET Third Report and Order,* 8 FCC Rcd 6589 at ¶ 36.

[14] 47 C.F.R. § 94.59(e).

B. Current Status of Microwave Relocation in the 2 GHz PCS Band

10. In the *Memorandum Opinion and Order* in GEN Docket No. 90-314,[15] the 1850-1990 MHz band was reallocated to licensed and unlicensed PCS as follows:



11. Licensed PCS. The 1850-1910 and 1930-1990 MHz bands were reallocated for licensed PCS operations in six blocks: the A, B, and C blocks are each 30 MHz and the D, E, and F blocks are each 10 MHz. Three A block pioneers preference licenses were awarded in December 1994. From December 1994 to March 1995, the Commission held auctions for the remaining licenses on the A and B blocks. The Commission awarded A and B block licenses to the winners of the auction in June 1995. The C block auction is currently scheduled to begin on December 11, 1995.[16] Specific dates for the D, E, and F block auctions have not been determined.

12. As of 1994, there were approximately 8,846 private microwave licenses issued in the 1850-1990 MHz band, mostly to local governments, petroleum companies, utilities, and railroads. In April 1995, the Wireless Telecommunications Bureau ("Bureau") issued a public notice announcing April 5, 1995 as the start date of the voluntary negotiation period

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[15] Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, *Memorandum Opinion and Order*, 9 FCC Rcd 5947.

[16] *Public Notice*, FCC Sets Auction Date of December 11, 1995 for 495 BTA Licenses in the C Block for Personal Communications Services in the 2 GHz Band, rel. Sept. 29, 1995.

for microwave incumbents operating in the A and B blocks.[17] The Bureau also stated that negotiation periods for the C, D, E, and F blocks would be announced by future public notices. Since the A and B block licenses were granted, numerous PCS licensees have begun relocation negotiations with microwave incumbents. For non-public safety incumbents in these blocks, the voluntary negotiation period will end April 4, 1997; for public safety incumbents, it will end April 4, 1998.

13. Unlicensed PCS. The 1910-1930 MHz band has been reallocated for unlicensed PCS devices. Under Part 15 of the Commission's rules, users of certain communications equipment may operate that equipment in this band without a license, subject to certain coordination requirements, as well as interference and power limitations.[18] Potential operators plan to use the spectrum for wireless PBX equipment, wireless messaging systems, wireless local area networks, and a broad range of data communications products.

14. The 1910-1930 MHz band is occupied by approximately 400 private microwave links. The incumbents located in the band designated for unlicensed PCS are only subject to a one-year mandatory negotiation mechanism.[19] Because there are no licensed PCS providers in this band to negotiate relocation agreements, the Commission has designated an industry organization, the Unlicensed PCS Ad Hoc Committee for 2 GHz Microwave Transition and Management ("UTAM"), to coordinate relocation in the unlicensed band.[20] The UTAM relocation plan, which was approved by the Commission in April 1995, calls for UTAM to spend approximately $67 million to relocate microwave links in the 1910-1930 MHz band, at an estimated cost of $200,000 per link.[21] UTAM will raise these funds by collecting a mandatory $20 fee for each unit from manufacturers of unlicensed PCS equipment as a condition of obtaining FCC certification. Once the 1910-1930 MHz band is clear, or there is little risk of interference to the remaining incumbents, and UTAM has recovered its relocation costs, UTAM's coordination role will end and it will be dissolved.

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[17] *Public Notice*, DA 95-872, Wireless Bureau Announces Initiation of Voluntary Negotiation Period for A and B Block PCS Licensees and 2 GHz Incumbent Microwave Licensees (Apr. 19, 1995).

[18] *See* 47 C.F.R. §§ 15.301-15.323 (1994).

[19] *ET Third Report and Order*, 8 FCC Rcd 6589 at ¶ 23.

[20] *See* Amendment of the Commission's Rules to Establish New Personal Communications Services, *Fourth Memorandum Opinion and Order*, GEN Docket No. 90-314, 10 FCC Rcd 7955, 7957 (1995).

[21] *Id.* at ¶ 8.

C. Distributing Relocation Costs Among PCS Licensees

15. Because of the pattern of use of the 1850-1990 MHz band by microwave incumbents, the relocation burden on each PCS licensee is not necessarily limited to microwave links within its spectrum block and licensing area. Some spectrum blocks assigned to microwave incumbents overlap with one or more PCS blocks. Also, incumbents' receivers may be susceptible to adjacent or co-channel interference from PCS licensees in more than one PCS spectrum block. In order to clear a particular spectrum block for unrestricted PCS use, a PCS licensee may be required to relocate links in other licensing areas or on other spectrum blocks that would otherwise cause or receive interference. For example, a microwave link located partially in Block A, partially in Block D, and adjacent to Block B, may cause interference to or receive interference from PCS licensees that are licensed in each of those blocks. Thus, several PCS licensees could benefit from the relocation of a single link. In addition, because most 2 GHz microwave licensees operate multi-link systems, PCS licensees may be required to relocate links that do not directly encumber their own spectrum or service area in order to obtain the microwave incumbent's voluntary consent to relocate.

16. The need for PCS licensees to clear microwave links that encumber spectrum outside of their own licensing areas and spectrum blocks creates a potential "free rider" problem, because subsequent licensees on those blocks also benefit from such band-clearing efforts. In addition, unless cost-sharing is adopted, PCS licensees may engage in relocation that is not cost-effective if viewed from an industry-wide perspective. For example, a link that encumbers two PCS blocks may not be moved if the cost is greater than the benefit to any single licensee, even though the joint benefit that two or more licensees would receive exceeds the cost of relocating the link. Also, even if the benefit to a single PCS licensee exceeds the cost of relocation, that licensee might not relocate the link if the licensee thought that, by waiting, some or all of the cost would be paid by others. These problems now exist with A and B block licensees, who are entering into negotiations with microwave incumbents, and might be required to clear a significant number of links on other licensees' spectrum blocks. This would provide the other licensees with a potential windfall. In addition, UTAM expects that licensed PCS providers will be required to relocate links in the unlicensed band which are paired with links in licensed PCS spectrum.

17. In 1994, PCIA requested that the Commission adopt a cost-sharing mechanism that would enable PCS licensees that relocate microwave incumbents to recoup a portion of their costs from other licensees that benefit from the relocation.[22] In its petition, PCIA

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[22] *See* PCIA Petition for Partial Reconsideration, GEN Docket No. 90-314 (filed July 25, 1994), at 5-7.

advocated three basic principles of a cost-sharing plan: (1) the cost sharing obligation should be predicated on a finding that the PCS licensee's operations would have caused interference to a microwave system's link path but for the relocation of that system; (2) when multiple PCS licensees benefit from relocation, individual PCS licensees should be required to pay a *pro rata* share only of the documented, direct costs of relocation (*i.e.*, reimbursement would be limited to the cost of providing comparable facilities and any premium payments would be excluded); and (3) a payment obligation should not arise until the time interference would have been caused.[23] In the *Third Memorandum Opinion and Order* in GEN Docket No. 90-314, the Commission stated that eliminating the "free rider" element of microwave relocation was attractive in theory, but concluded that PCIA's proposal was not sufficiently developed.[24]

D. Pacific Bell Petition for Rulemaking

18. On May 5, 1995, PacBell filed a Petition for Rulemaking that proposed a detailed cost-sharing plan in which PCS licensees on all blocks, licensed and unlicensed, would share in the cost of relocating microwave stations. Under PacBell's proposed plan, a PCS licensee that negotiates a relocation agreement with a microwave incumbent outside of its own licensing area or spectrum block would "inherit" the interference protection rights of the incumbent, as if the relocated link were still in place. If a subsequent PCS licensee sought to operate a facility that infringed on these interference rights, *i.e.*, that would have caused interference to the link if it had not been relocated, the subsequent licensee would be required to compensate the first PCS licensee under a prescribed formula.

19. On May 16, 1995, we requested comment on PacBell's proposal.[25] Initial comments were due on June 15, 1995 and replies were due June 30, 1995. We received twelve comments and eleven reply comments.[26] As discussed below, most commenters -- both PCS licensees and incumbent microwave licensees -- support the cost-sharing concept, although the comments reflect some differences regarding the details of PacBell's proposal.

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[23] *Id.*

[24] Amendment of the Commission's Rules to Establish New Personal Communications Services, *Third Memorandum Opinion and Order*, GEN Docket No. 90-314, 9 FCC Rcd 6908 at ¶ 39-41.

[25] *Public Notice*, Report No. 2073 (rel. May 16, 1995).

[26] *See* Appendix B for a list of commenters, dates the comments were filed, and short-form citations.

III. NOTICE OF PROPOSED RULE MAKING

A. Cost-Sharing Proposal

1. Overview

20. Under PacBell's proposed plan, PCS licensees would be deemed to purchase "interference rights" from incumbent microwave licensees with whom they negotiate relocation agreements. Subsequent PCS licensees that would have caused harmful interference to relocated links would be required to reimburse the holder of the interference rights for a *pro rata* share of its "direct" relocation costs, *i.e.*, the actual cost of relocating microwave facilities as opposed to any premium that the PCS licensee might pay to the incumbent as an incentive to move during the voluntary negotiation period. The *pro rata* share that each new PCS provider pays would be calculated based on a formula that takes into account the number of licensees that have previously contributed to paying the relocation cost of the link. The formula also depreciates the required reimbursement amount based on the initial PCS licensee's ten-year license term, so that licensees that enter the market earlier pay a larger share than those who enter the market later. Finally, PacBell proposes that a $600,000 cap per link be placed on the amount eligible for reimbursement. Any relocation expenses incurred above the $600,000 per link limit would be absorbed by the PCS licensee that relocates the links (hereinafter referred to as the "PCS relocator").

21. A and B block PCS licensees overwhelmingly support the adoption of a cost-sharing plan to eliminate the "free rider" problem. In response to PacBell's petition, PCIA has submitted a proposal that combines the basic principles from the original PCIA cost-sharing plan (submitted to the Commission in 1994) with the specifics of PacBell's plan. PCIA's plan, which has received broad support from the PCS industry, is substantially similar to the PacBell proposal but differs from it in several respects. First, PCIA's plan more narrowly defines the direct costs that would be eligible for reimbursement.[27] Second, whereas PacBell's plan required cost sharing for both adjacent and co-channel interference, PCIA suggests limiting cost sharing to co-channel interference only.[28] Third, PCIA argues that PacBell's proposed $600,000 cap on reimbursement is too high, and suggests instead a cap of $250,000 per link, plus $150,000 for situations where it is necessary to build a new tower.[29] In the interest of industry consensus, PacBell stated in its reply comments that it supports PCIA's modifications.[30] UTAM also generally supports PCIA's consensus

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[27] PCIA Comments at 14-17.

[28] *Id.* at 10-11.

[29] *Id.* at 15-16.

[30] PacBell Comments at 1.

proposal.[31]

22. Most microwave incumbents support adoption of a cost-sharing plan, because they believe that it will encourage the relocation of entire microwave systems rather than individual links. Some microwave incumbents support the concept of a cost-sharing formula, but oppose specific parts of the proposal, *e.g.*, the reimbursement cap.[32] Others oppose the plan altogether, arguing that it is too early in the relocation process to do anything that may alter the outcome of voluntary negotiations.[33] The Utilities Telecommunications Council ("UTC") supports the plan in general, but states that other means of consideration, such as non-cash transactions, need to be factored into the plan.[34]

23. We tentatively conclude that the public interest is served by requiring PCS licensees that benefit from the relocation of a microwave link to contribute to the costs of that relocation. Under our current rules, the PCS relocator has no right to reimbursement if a PCS licensee relocates a microwave link that encumbers another PCS licensee's authorized frequencies or is located in another licensee's territory. Thus, any form of cost-sharing that occurs must be voluntarily negotiated. Although affected PCS entities may be able to identify each other and negotiate a joint relocation agreement, in many cases parties benefitting from a relocation may not be in a position to reach such an agreement before one of the parties must move the link for its own business reasons. In particular, prior to the licensing of the C, D, E, and F Blocks, informal cost sharing of relocation expenses that benefit these blocks is impossible because the licensees for these blocks are unknown. As a result, existing PCS licensees may be hesitant to move links unilaterally without some assurance that future competitors who benefit from the relocation will pay a share of the cost.

24. We believe that adoption of a mandatory cost-sharing plan would significantly enhance the speed of relocation by reducing the "free rider" problem and creating incentives for PCS licensees to negotiate system-wide relocation agreements with microwave incumbents. This would in turn result in faster deployment of PCS and delivery of service to the public. We also tentatively conclude that the cost-sharing plan submitted by PCIA, with a few modifications, offers a practical and equitable approach to allocating the costs of relocation. The mechanics of the plan are set forth in more detail below. We seek comment on the advantages and disadvantages of adopting mandatory cost-sharing and on the specifics of our proposal.

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[31] *See* UTAM Reply at 2.

[32] *See, e.g.*, The City of San Diego Comments at 7, Metropolitan Comments at 3-5, Southwestern Bell Comments at 3, and UTC Comments at 5-6.

[33] *See, e.g.*, Duncan, Weinberg Comments at 6; Keller and Heckman Reply at 7.

[34] UTC Comments at 6.

2. Mechanics of the Cost-Sharing Plan

a. The Cost-Sharing Formula.

25. Background. Under PCIA's consensus plan, PCS licensees would be entitled to reimbursement based on a cost-sharing formula. The formula is derived by amortizing the cost of relocating a particular microwave link over a ten-year period. As PCS licensees enter the market, their share of relocation costs is adjusted to reflect the total number of PCS licensees that benefit and the relative time of market entry. The proposed formula is:

$$R_N = \frac{C}{N} \times \frac{[120 - (T_N - T_1)]}{120}$$

- R equals the amount of reimbursement.
- C equals the amount paid to relocate the link.
- N equals the next PCS licensee that would interfere with the link. (The PCS relocator is denominated as N = 1. After the link is relocated, the next PCS provider that would interfere would be 2, and so on.)
- T_N equals T_1 plus the number of months that have passed since the relocator obtained its reimbursement rights.
- T_1 equals the month that the first PCS licensee obtained rights to reimbursement (as denoted by the numerical abbreviation for each month, *i.e.*, March = 3).

26. The following is an example of how the formula would work: In January 1996, PCS Licensee A pays $210,000 to relocate microwave Link X. Thus, C = $210,000.[35] Licensee A thereby obtains the reimbursement rights[36] to the relocated link as of January 1996, so $T_1 = 1$. In January 1997, PCS Licensee B places facilities into operation that infringe upon Licensee A's reimbursement rights.[37] As a result, $T_N = T_1 + 12$ months, or 13. Because Licensee B is the second PCS provider to commence operations that benefit from the relocation of Link X, N now equals 2. The calculation of Licensee B's reimbursement payment is as follows:

$$R_2 = \frac{210{,}000}{2} \times \frac{[120 - (13 - 1)]}{120} = \$\ 94{,}500$$

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[35] This example assumes that Licensee A did not pay any relocation premium, so that the full $210,000 reflects actual relocation costs.

[36] "Reimbursement rights" are discussed in Section III(A)(3)(a), *infra.*

[37] This determination is made based on whether licensee B's facilities would have interfered with link X if it were still in place. *See* discussion on interference standard in Section III(A)(3)(b), *infra.*

Thus, Licensee B pays $94,500 to Licensee A, while Licensee A remains unreimbursed for $115,500 of its original cost. The $21,000 difference is due to the depreciation factor in the formula, and reflects the fact that Licensee A benefited from the relocation of Link X a year before Licensee B.

27. In January 1998, Licensee C places a system in service that would have caused interference to Link X. Because Licensee C is the third licensee to benefit from the relocation of Link X, N now increases to 3. Licensee C pays $56,000 under the formula as follows:

$$R_3 = \frac{210{,}000}{3} \times \frac{[120 - (25-1)]}{120} = \$\ 56{,}000$$

The $56,000 payment is divided equally between Licensees A and B. Thus, the net payment by Licensee A is now reduced by $28,000 to $87,500 and the net payment by Licensee B is similarly reduced to $66,500. Licensee C's share is lower than either because of the additional year of depreciation that has occurred before Licensee C entered the market. The formula can be applied in the same manner to subsequent PCS licensees that interfere with Link X.

28. Most commenters support adoption of the proposed formula.[38] The only criticism comes from UTC, which is concerned that the formula is too inflexible and does not recognize or account for negotiations that consist of non-cash transactions, *e.g.*, agreements relating to the exchange of PCS service for voluntary relocation or interconnection of PCS base stations.[39] UTC suggests that parties be permitted to negotiate their own reimbursement figure using the formula as a guideline.[40]

29. Discussion. We tentatively conclude that the above formula provides an effective and straightforward means of determining a subsequent licensee's reimbursement obligation. Although UTC has objected to it as inflexible, we believe that a relatively simple formula is essential to make cost-sharing administratively feasible, particularly in light of the number of links that will require relocation and the number of PCS licensees potentially involved. We believe the proposed formula strikes an appropriate balance between equitable allocation of relocation costs and administrative feasibility. We also emphasize that PCS licensees would

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[38] *See, e.g.*, API Comments at 6-7; BellSouth Comments at 2; PCIA Comments at 1; Sprint Comments at 1-2; AAR Reply at 1-2; Southwestern Bell Reply at 10; UTAM Reply at 2.

[39] UTC Comments at 6-8.

[40] *Id.* at 8.

remain free to negotiate alternative cost-sharing terms under our proposal.[41] We request comment on the proposed formula and any alternatives. We also seek comment on the logistics of applying the formula (*e.g.*, whether fractions should be rounded up or down).

30. One difference between PacBell's original proposal and PCIA's proposed formula is the "T_1" variable, which represents the date from which depreciation begins. PacBell proposes to calculate depreciation from the date that the PCS relocator acquires its interference rights,[42] whereas PCIA proposes to begin depreciation on the date that the PCS relocator places its system in service.[43] We tentatively conclude that T_1 should be based on the date that the PCS relocator acquires its reimbursement rights (as discussed *infra* in Section III(A)(3)), because that date will be registered with the clearinghouse (discussed *infra* in Section III(A)(5)) and easy to confirm. The date that the PCS relocator places its system in service would be more difficult to confirm, because the PCS relocator may place its system in operation without providing notification or seeking advance clearance. Moreover, the possibility exists that the PCS relocator would place its system in operation *after* a subsequent PCS licensee has started service (*i.e.*, as a result of delays in construction or technical problems). If so, the subsequent licensee would pay more than the PCS relocator under PCIA's proposed formula.

31. We agree with commenters who argue that the initial PCS relocator should always be required to pay the largest share of the expenses as an incentive to negotiate the lowest possible relocation costs, and we therefore prefer PacBell's original proposal to PCIA's alternative. We also seek comment, however, on whether the T_1 variable should be based on a uniform fixed date for all PCS licensees. For example, we could start depreciation for purposes of all agreements in the month that the voluntary negotiation period began for the A and B block licensees (April 1995) or the month that the A and B block licenses were granted (June 1995). One advantage of calculating depreciation based on a uniform date is that future licensees would be better able to estimate their potential relocation costs. The formula would also be easier to apply from an administrative perspective.

32. Full Reimbursement. PCS licensees are likely to be more willing to relocate an entire system, rather than singling out links that interfere solely with their own operations, if they receive the right to recoup some or all of the expenses associated with relocating non-interfering links. As the microwave licensees contend, and we concur, providing an incentive to move entire microwave systems (and thereby enabling a seamless transition to the new frequency) is a major benefit of adopting a cost-sharing plan. To encourage system-wide relocations, PCIA proposes that a PCS licensee who relocates a microwave link that is not operational in either its licensed frequency band (*e.g.*, A block, B block) or its service

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[41] PacBell proposed such flexibility in its Petition as well. *See* PacBell Petition at 10.

[42] PacBell Petition at 8.

[43] PCIA Comments at 15.

area (*e.g.*, MTA, BTA) should be entitled to 100 percent reimbursement of the costs of relocating that link.[44] Thus, the first PCS licensee to provide service either on the frequency band or in the market where the link is located, would be required to reimburse the PCS relocator for 100 percent of its relocation costs, up to the reimbursement cap.[45] The PCS licensee providing service would then become the full "owner" of the right to be reimbursed, and therefore would become the PCS relocator for cost-sharing purposes.

33. We tentatively agree with PCIA that, under some scenarios, PCS relocators should be entitled to full reimbursement, up to the cap, for relocating non-interfering links. Under PCIA's proposal, the PCS relocator would receive full reimbursement if it relocates links that are (1) fully outside of its market area, or (2) fully outside of its licensed frequency band, whether or not the links would have caused interference to or received interference from the PCS relocator's system. We tentatively agree with PCIA that a PCS relocator should be entitled to full reimbursement for relocating links with both endpoints outside of its licensed service area, subject to the reimbursement cap. Such links are unlikely to interfere with the relocator's system, and are easy to identify for purposes of administering the cost-sharing plan.

34. We seek comment on the second aspect of PCIA's full reimbursement proposal, which would also entitle a PCS relocator to reimbursement for relocating links that are outside of its licensed frequency block. Specifically, we request comment on whether a PCS licensee should receive 100 percent reimbursement (up to the cap) for relocating a link that is inside of its market area and outside of its frequency block, even if the link would have caused adjacent-channel interference to its own PCS system.[46] If so, the PCS licensee would be relocating the link for its own benefit *and* receiving full reimbursement, up to the cap. Alternatively, we seek comment on whether a PCS licensee should be entitled to full reimbursement (up to the cap) if it relocates a link outside of its frequency block that also would have been non-interfering. If we were to differentiate between the last two alternatives, would disputes arise over whether or not the link actually would have been non-interfering? Assuming we only allow full reimbursement, up to the cap, for links with both endpoints outside of the PCS relocator's market area, reimbursement would be as follows:

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[44] *Id.* at 16.

[45] The "reimbursement cap" is discussed in Section III(A)(2)(d), *infra.*

[46] The instances in which a PCS licensee would need to relocate links that cause adjacent channel interference are likely to be quite numerous.

	Fully Within Relocator's Block	Partly Within Relocator's Block	Outside of Relocator's Block
Both endpoints inside Relocator's MTA/BTA	No reimbursement	*Pro rata* reimbursement	*Pro rata* reimbursement
One endpoint inside Relocator's MTA/BTA	*Pro rata* reimbursement	*Pro rata* reimbursement	*Pro rata* reimbursement
No endpoints inside Relocator's MTA/BTA	100 percent reimbursement (up to the cap)	100 percent reimbursement (up to the cap)	100 percent reimbursement (up to the cap)

We request comment on our proposal and any alternatives.

35. Expenses Already Incurred. As a related matter, we tentatively conclude that PCS licensees should be permitted to seek reimbursement for any relocation costs incurred after the voluntary negotiation period began for A and B block licensees on April 5, 1995. Once the new rules are effective and a clearinghouse is established, receipts from expenses already incurred would be submitted for accounting purposes. This would allow those PCS licensees, which have already relocated or are in the process of relocating microwave systems, to receive the same reimbursement benefit as other PCS licensees that relocate microwave systems after any rule change. We seek comment on this proposal.

b. Compensable Costs

36. Background. The factor "C" in the proposed cost-sharing formula equals the amount actually paid to relocate the link. Thus, we must determine which costs will be included in the calculation, and whether some types of costs will be considered nonreimbursable. Relocation costs can be divided roughly into two categories: (1) the actual cost of relocating a microwave incumbent to comparable facilities (the definition of "comparable facilities" is discussed in further detail in Section III(B)(2), *infra*), and (2) payments above the cost of providing comparable facilities, also referred to as "premium payments." In its original proposal, PacBell advocated not separating out direct costs of relocation from premium payments, in order to avoid controversial determinations.[47] PCIA, on the other hand, asserts that only actual relocation costs should be eligible for

[47] PacBell Petition at 6.

reimbursement.[48] Most commenters agree that later market entrants should be required to contribute only to the actual cost of relocation.[49]

37. Discussion. We tentatively conclude that premium payments should not be reimbursable, because such payments are likely to be paid by PCS licensees to accelerate relocation so that they can be the first licensee in the market area to offer PCS services. We do not believe later market entrants should be required to contribute to premium payments, because they have not received the corresponding advantage of being first to market. We therefore propose to limit the calculation of reimbursable costs under the formula to actual relocation costs. Actual relocation costs would include such items as: radio terminal equipment (TX and/or RX - antenna, necessary feed lines, MUX/Modems); towers and/or modifications; back-up power equipment; monitoring or control equipment; engineering costs (design/path survey); installation; systems testing; FCC filing costs; site acquisition and civil works; zoning costs; training; disposal of old equipment; test equipment (vendor required); spare equipment; project management; prior coordination notification under Section 21.100(d) of the Commission's rules; site lease renegotiation; required antenna upgrades for interference control; power plant upgrade (if required); electrical grounding systems; Heating Ventilation and Air Conditioning (HVAC) (if required); alternate transport equipment; and leased facilities. We request comment on this proposal, and on any additional types of costs that commenters believe should be eligible for reimbursement. We also request comment on whether failure to allow recovery of premium payments will inhibit relocation during the voluntary period, because some licensees will be receiving the benefit of early relocation without contributing to the premium payments associated with relocating the link on an expedited basis. Is there an easily administered policy that would permit the recovery of premium payments only during the voluntary period? For example, should we allow premium costs to be included in the cost-sharing equation, but subject them to an accelerated depreciation schedule that reduces them to zero at the end of the voluntary period?

c. Length of Obligation

38. Background. As noted above, the proposed formula is based on a ten year depreciation period.[50] Thus, if a subsequent licensee places a system in service ten years after the depreciation clock begins (*see* discussion in Section III(A)(2)(a), *supra*), that subsequent licensee would owe nothing under the proposed formula. Under the PacBell proposal, however, the ten-year period would differ for each link based on the timing of the relocation agreement. Some commenters argue that cost-sharing obligations for all PCS

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[48] PCIA Comments at 15-16; PCIA Reply at 6.

[49] *See, e.g.,* BellSouth Comments at 2; McCaw Reply at 2-3; Southwestern Bell Reply at 2; UTAM Reply at 2.

[50] *See* PacBell Petition at 8.

licensees should end after a uniform fixed period.[51] Southwestern Bell suggests a cut-off of five years after relocation.[52] PCIA proposes that all obligations sunset ten years after the last PCS license is awarded by the Commission.[53] BellSouth argues against any cut-off date, stating that PacBell's proposed system adequately addresses concerns about the length of cost-sharing obligations.[54] In its reply comments, PacBell asserts that the rule should be effective for 10 years, which coincides with the ten-year depreciation period and the term of the license.[55]

39. Discussion. We tentatively conclude that the cost-sharing plan should sunset for all PCS licensees ten years after the date that voluntary negotiations commenced for A and B block licensees, which means that cost-sharing would cease on April 4, 2005. We believe that it is important to set a date certain on which the clearinghouse will be dissolved, and adopt a cost-sharing plan with the fewest possible variables so that it will be easy to administer. We also believe that this time period is sufficient for all licensees (including those in the C, D, E, and F blocks, which will be licensed in the near future) to complete most relocation agreements. This ten-year period also roughly coincides with the initial PCS license terms and the ten-year depreciation period under the proposed formula. To the extent that some obligations would have extended beyond this date under the formula (*e.g.*, because depreciation started a few years into the negotiation period), we believe that the limited benefit that licensees would receive is outweighed by the cost of maintaining a clearinghouse beyond the ten-year period.[56] We also believe that the vast majority of links will need to be relocated before the ten year sunset date in order for PCS licensees to meet their coverage requirements. We seek comment on this proposal.

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[51] *See, e.g,* City of San Diego Comments at 6-7; PCIA Comments at 15; PacBell Reply at 5.

[52] Southwestern Bell Comments at 5.

[53] PCIA Comments at 11.

[54] BellSouth Reply at 5, n. 12.

[55] PacBell Reply at 5.

[56] The cost of relocation would be subject to the same formula, regardless of when a link is relocated.

d. Reimbursement Cap

40. Background. In its comments, PCIA advocates a $250,000 cap on the reimbursement amount that a PCS licensee may obtain from subsequent licensees for the relocation of an individual microwave link.[57] PCIA also proposes a supplemental cap of $150,000 for situations in which a new tower is required.[58] Although PacBell originally proposed a cap of $600,000 in its petition, it now supports the PCIA proposal, as do most other PCS licensees.[59] PCS licensees argue that the proposed cap is necessary because it provides an incentive for PCS licensees conducting negotiations to control relocation costs.[60] The cap also protects the interests of subsequent licensees that have had no input into the negotiations.[61] They assert that the cap will lower administrative costs by minimizing disagreements between PCS licensees over the reasonableness of relocation costs.[62] Finally, supporters of the cap also emphasize that the cap would not limit the amount that PCS licensees may pay to microwave incumbents to relocate their facilities.[63]

41. Microwave incumbents oppose the imposition of a reimbursement cap. These commenters argue that the cap would place an artificial ceiling on the price of relocating a link or would otherwise create a disincentive to enter into voluntary negotiations.[64] Some commenters also assert that a reimbursement cap would provide a "subsidy" to PCS licensees and may force microwave incumbents to bear some of the cost of relocation themselves.[65] Microwave incumbents also dispute whether relocation costs will average $250,000. For support, AAR cites a 1992 study by the Federal Communications Commission Office of Engineering and Technology ("OET") which concluded that some relocation costs could be as high as $814,000, depending on the number of links required to cover the distance of a

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[57] PCIA Comments at 16.

[58] *Id.*

[59] PacBell Reply at 1, *see also* BellSouth Comments at 2-3; Sprint Comments at 4; McCaw Reply at 2-3; Southwestern Bell Reply at 8.

[60] *See, e.g.*, PCIA Comments at 16; McCaw Reply at 3; Southwestern Bell Reply at 7.

[61] *See* PCIA Comments at 16.

[62] *Id.*

[63] *See, e.g.*, PacBell Reply at 2; PCIA Reply at 4-5.

[64] *See, e.g.*, API Comments at 6; City of San Diego Comments at 7; UTC Comments at 5-6.

[65] *See, e.g.*, AAR Comments at 5-6.

2 GHz link when the facility converts to a higher frequency.[66]

42. Discussion. We tentatively conclude that a cap on the amount subject to reimbursement under the cost-sharing formula is appropriate, because it protects future PCS licensees -- who have no opportunity to participate in the negotiations -- from being required to contribute to excessive relocation expenses. In addition, a reimbursement cap would enable participants in future PCS auctions to assess the value of a license more accurately, because these applicants would be able to determine in advance the maximum amount they may be required to contribute towards relocation costs. We also tentatively agree with PCIA that a cap will not force microwave licensees to contribute to the cost of their own relocation. First, as PCIA points out, the cap does not limit payments to microwave incumbents. Second, our rules provide that microwave incumbents must receive comparable facilities, regardless of their cost.[67] Third, the cap is unlikely to affect premium payments if we adopt the proposed cost-sharing plan, because premium payments would not qualify for reimbursement anyway. Finally, with or without a cap in place, we anticipate that PCS licensees will have ample incentive to negotiate reasonable terms with microwave incumbents in order to clear their spectrum quickly. We request comment on this tentative conclusion.

43. If a cap is imposed, we believe the amount should be sufficient to cover the average cost of relocating a link. While this may require the initial PCS relocator to bear more of the cost in cases where relocation expenses are unusually high, setting the cap at a higher level could shift the burden unfairly to subsequent licensees in many more cases. We tentatively conclude that a $250,000 per link cap (plus $150,000 if a tower is required) is appropriate. This amount has the consensus support of PCS commenters as an accurate approximation of the likely cost of relocating most microwave stations. We also believe this amount is consistent with the study conducted by the FCC Office of Engineering and Technology cited by AAR.[68] OET's estimate of $800,000 to relocate a link assumed that four links would be required at the higher frequency to cover the same distance. In the 6 GHz band, however, where most relocation will occur, the same study indicates path lengths are likely to be similar to those in the 2 GHz band.[69] Thus, applying OET's methodology, relocation costs should average approximately $132,000 to $215,000, except in unusual

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[66] AAR Comments at 7.

[67] *See* 47 C.F.R. § 94.59.

[68] AAR Comments at 7.

[69] *See* FCC Office of Engineering and Technology, Creating New Technology Bands for Emerging Telecommunications Technology, OET/TS 92-1 at 18.

instances where more than one link is required.[70] Similarly, UTAM has estimated that relocation costs will average $200,000 per link to cover the same distance or an existing single link.[71] We request comment on this proposal.

3. Cost-Sharing Obligation

a. Creation of Reimbursement Rights

44. Background. Under our current rules, microwave licensees (1) receive the right to operate over a particular channel or channels, and (2) are entitled to interference protection.[72] The PCIA consensus plan proposes that the Commission allow the microwave licensee's interference protection rights to be "severed" from its transmission rights so that the interference rights can be transferred to the PCS licensee that relocates the facility.[73] Upon notification that an agreement has been reached and the transfer has been made, PCIA proposes that the FCC database would register the PCS relocator as the holder of the interference rights.[74] Because the transmitting rights would not be transferred, the microwave incumbent would retain them under its existing authorization until such time as the relocation actually occurs. When a subsequent PCS licensee later begins the required

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[70] Cost estimates in the OET study for relocation, even to frequencies just above 3 GHz, range from $125,000 to $150,000 for transmitters, receivers, and replacement antennas; $300 to $3,500 for frequency coordination; $3,000 to $30,000 for 3-meter high performance antennas necessary in some situations such as highly congested areas; and $1,000 to $20,000 for structural improvements to support the increased loading of such antennas. OET Study at 32-33. Thus, AAR estimates that the cost to relocate the average link would range from $125,300 to 203,500 in 1992 dollars. AAR Comments at 7, n. 14. Adjusting for inflation, the range in 1994 dollars would be approximately $132,000 to $215,000.

[71] *See* Amendment of the Commission's Rules to Establish New Personal Communications Services, GEN Docket No. 90-314, *Fourth Memorandum Opinion and Order*, 10 FCC Rcd 7955, 7957 (1995).

[72] *See, e.g.*, 47 C.F.R. § 94.63. Section 94.63 of the Commission's Rules defines the interference criteria for private fixed microwave licensees and establishes an obligation not to interfere and a right to not be interfered with.

[73] PCIA Comments at 11. This concept was originally proposed to the Commission by Columbia Spectrum Management in 1994 when PCIA first suggested that we adopt a cost-sharing plan. *See* Columbia Spectrum Management *ex parte* filing, GEN Docket No. 90-314 (filed Jan. 12, 1994).

[74] PCIA Comments at 18.

prior coordination notice (PCN) process,[75] that licensee would be informed of its obligation to reimburse the holder of the link's interference rights if the PCN process determines that the subsequent licensee's system would have caused interference to the original link.

45. Supporters of the plan agree that the creation of transferable rights is a necessary element of the cost-sharing proposal. API, BellSouth, CTIA, the City of San Diego, McCaw, PCIA, Sprint, and UTC all support the concept of transferrable interference rights. Keller and Heckman, a law firm that represents numerous microwave incumbents, agrees that interference rights are an important concept, but argues that such rights already exist under Commission rules. Therefore, it urges the Commission simply to clarify previous rulemakings to establish that such rights may be transferred, instead of initiating a rulemaking proceeding.[76]

46. Discussion. We tentatively agree that the PCS relocator should obtain some form of rights for which it would be entitled to reimbursement. We seek comment on how such rights should be created procedurally. We propose that, once a PCS licensee and a microwave incumbent have signed an agreement that provides for the relocation of a specified number of microwave links, the parties would submit the relocation agreement to a clearinghouse (discussed in detail in Section III(A)(5)). On the date that the relocation agreement is submitted, the clearinghouse would replace the name of the microwave incumbent with the name of the PCS relocator in a database maintained for the purpose of determining reimbursement.[77] As of that date, the PCS relocator would become the holder of "reimbursement rights" for all links covered by the relocation agreement. When a subsequent PCS licensee begins the required PCN process, that licensee would also contact the clearinghouse to determine whether any PCS relocators hold reimbursement rights for the channel over which it intends to transmit.

47. We tentatively conclude that the creation of reimbursement rights -- which are separate, distinct, and unaffiliated with the underlying microwave license -- are preferable to the concept of transferring the incumbent's "interference" rights as proposed by PCIA. First, reimbursement rights would be able to co-exist with an active microwave

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[75] Section 21.100(d) of the Commission's rules requires that proposed frequency usage be prior coordinated with existing users in the area and other applicants with previously filed applications, whose facilities could affect or be affected by the new proposal in terms of frequency interference or restricted ultimate system capacity. *See* 47 C.F.R. § 21.100(d).

[76] Keller and Heckman Reply at 5 (stating that, under the Administrative Procedure Act, 5 U.S.C. § 553(b)(3)(A), a notice and comment rule making is not necessary for the Commission to issue interpretive rules).

[77] The cost-sharing database would be similar to the database maintained by the Commission for the purposes of determining interference. In fact, it may be preferable to combine or link the two databases so that only one search needs to be conducted.

authorization, which means that the microwave licensee would retain its right not to be interfered with as long as it continues to operate. We believe that it is important for the microwave incumbent to retain all of its rights under its original authorization until its new system is in place. Second, any transfer of rights relating to a license (even if only partial rights are being transferred) would require Commission approval under Section 310(d) of the Communications Act, as amended. Thus, under PCIA's proposal, the microwave incumbent would be required to request permission from the Commission to transfer its interference rights to a PCS licensee. The PCS licensee could not obtain the interference rights until the Commission has acted. We believe that such a procedure would be time consuming and administratively cumbersome. Third, the interference rights would have to exist independently from the microwave license, so that they would not be cancelled at the same time the microwave incumbent returns its 2 GHz license to the Commission. We seek comment on the creation of reimbursement rights.

48. Another alternative would be for the microwave licensee to assign its microwave license to the PCS licensee under Section 94.47 of the Commission's rules, as part of a relocation agreement.[78] The assignment would require Commission approval, but would effectively transfer the incumbent's entire license to the PCS licensee. The difficulty with this approach is that under Section 94.53, the microwave license must be cancelled if the facility has been non-operational for a year. Because the PCS licensee would not operate a microwave system, a mechanism would be required that enables the PCS licensee to exercise its rights after the microwave facility has become non-operational.

49. We are uncertain whether either of these procedural alternatives precisely fits the needs of the proposed cost-sharing plan. We believe that under any scenario, some form of reimbursement rights should be conferred on the PCS relocator, so that the PCS relocator is able to enforce its rights and collect reimbursement from subsequent licensees. We also believe that any rights obtained by the PCS relocator should be separate from the rights of the incumbent licensee, so that (1) the incumbent may continue to operate under its existing authorization during the relocation process, and (2) the microwave license may be transferred, cancelled, or returned to the Commission at any time without affecting the rights held by the PCS relocator for cost-sharing purposes. We seek comment on the above options and any alternatives.

b. Definition of Interference

50. To ascertain whether subsequent licensees are obligated to make a payment under the proposed plan, we must decide (1) what standard will be used to determine interference, and (2) what type of interference (*e.g.*, co-channel versus adjacent channel) triggers a cost-sharing obligation.

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[78] *See* 47 C.F.R. § 94.47.

51. Interference Standard. The PCIA consensus plan proposes to use the criteria set forth in the TIA Telecommunications Systems Bulletin 10-F, "Interference Criteria for Microwave Systems," May 1994, or some other industry-accepted standard, to determine whether interference has occurred.[79] Commenters generally support the use of TIA Bulletin 10-F for determining potential interference as a basis for cost-sharing between PCS providers.[80] They argue that the Bulletin 10-F sets out a clear standard for determining interference, and thus determining if a second PCS licensee benefits from a relocation paid for by an earlier PCS licensee. Cox, on the other hand, alleges that TIA Bulletin 10-F contains only interference standards for microwave-to-microwave interference, and that the standards do not lend themselves directly to assessing PCS-to-microwave interference.[81] Southwestern Bell agrees with Cox and also alleges that TIA Bulletin 10-F does not directly address adjacent channel interference or differences in terrain.[82] TIA responds to these allegations and states that TIA Bulletin 10-F was developed to be used as the industry standard for determining PCS-to-microwave interference, and that Bulletin 10-F addresses all applicable problems and criteria, including those mentioned by Cox and Southwestern Bell.[83]

52. We tentatively conclude that the TIA Bulletin 10-F is an appropriate standard for determining interference for purposes of the cost-sharing plan. We agree with TIA that the TIA Bulletin was developed to determine PCS-to-microwave interference as well as microwave-to-microwave interference. Additionally, TIA Bulletin 10-F is already the standard used to determine PCS-to-microwave interference.[84] We also note, however, that the procedures set forth in TIA Bulletin 10-F permit the use of different propagation models and allow alternative technical parameters to be employed. Therefore, TIA Bulletin 10-F may not provide a clear standard for determining interference in some situations. We seek comment on whether our application of Bulletin 10-F[85] should be limited in scope for

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[79] PCIA Comments at 18.

[80] *See, e.g.,* Sprint Comments at 2, BellSouth Reply at 6-7; UTAM Reply at 5; UTC Reply at 6.

[81] Cox Comments at 3.

[82] Southwestern Bell Reply at 6; *see also* Cox Comments at 2-4.

[83] TIA Ex Parte Comments at 1-2.

[84] 47 C.F.R. § 24.237(a).

[85] TIA is currently working with representatives of the industry to develop Bulletin 10-G, which would modify the parameters of Bulletin 10-F. These new parameters and requirements may better represent PCS-to-microwave interference standards and could be utilized in applying the cost-sharing mechanism.